

# Fish Return to Indonesian Reefs



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*A villager in the Minahasa district participates in reef cleanup following an infestation of crown-of-thorns starfish. When a reef ecosystem gets out of balance, unchecked growth of starfish causes loss of live coral at an unsustainable rate. Then reef cleanups are critical—especially in areas where humans depend on marine resources for their food and livelihood. The community-based coastal zone management in North Sulawesi is boosting coral cover and fish populations.*

Fishermen no longer use bombs to kill fish on the fragile coral reefs in the villages of Tumbak and Blongko in North Sulawesi, Indonesia, thanks to U.S. development programs that taught them how to better manage their resources.

“I haven’t heard any bomb fishing for almost a year now,” one fisherman said, “It used to be you heard it every day.”

A community-based marine protected area was established three years ago in the two villages of North Sulawesi. Since then, a spearfisher said, “catches have increased from 5 kilograms per day to 7.5–10 kilograms per day.”

Illegal coral mining is also on the decline. This practice, like bomb fishing, threatened highly productive coral reefs.

As a result of the end of bomb fishing, monitoring studies begun in 2000 show that coral cover is increasing and fish populations are recovering.

More than 1 billion people in Asia rely on healthy and productive marine ecosystems for their food and livelihoods. By co-managing their abundant coastal seas, Indonesian villagers and government officials are learning that they stand a better chance of preventing overharvesting and ending other destructive practices.

Decentralization is transferring marine stewardship to provinces and districts in Indonesia. As a result, the Coastal Resources Management Program supported by USAID works at the local level. Four villages in the Minahasa district of the North Sulawesi region serve as models. USAID is now helping an additional 24 neighboring villages to follow

their lead in establishing marine protected areas.

The Minahasa district passed Indonesia’s first-ever district coastal law in 2002, requiring community-based management: decisions about resources must be made publicly and with input from the community.

The Ministry of Marine Affairs and Fisheries predicts that another 16 districts will pass coastal management laws based on the Minahasa model.

The new national coastal policy draft legislation, which supports decentralized coastal management, reflects the more open political process in Indonesia in recent years. It was drawn up with input from local officials, NGOs, and the private sector.

One lesson USAID has learned is that alternative income is an essential ingredient for successful conservation. The village of Blongko collects enforcement fines to maintain the sanctuary and support economic development. In Talise, residents are diversifying household income by planting vegetables and planning eco-tours to capitalize on the outstanding biodiversity that exists in the coral reefs and the upland forest areas.

Since 1997, USAID has supported the Coastal Resources Management Program, which operates in East Africa, Latin America, and the western Pacific. ★

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*By Richard Volk, USAID/EGAT/Natural Resources Management.*